

Domain :  $x$ -values, input,  
independent variable

Range :  $y$ -values, output  
dependent variable

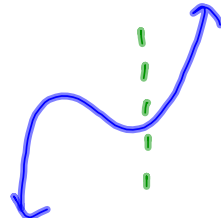
Function : Each  $x$ -value is  
paired with exactly  
one  $y$ -value.

Function:  $(1,2)(2,4)$

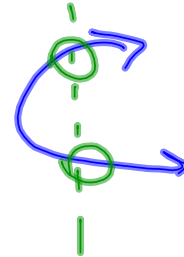
Not a function:  $(1,2)(1,3)$

- Vertical Line Test : If  
A vertical line crosses  
the graph only once,  
it is a function.

Function



Not a function



①

$$y = |x| - 2$$

$$D: (-\infty, \infty)$$

$$R: [-2, \infty)$$

③

$$y = -2 + \sqrt{1-x}$$

$$D: (-\infty, 1] \quad \begin{array}{l} 1-x \geq 0 \\ 1 \geq x \end{array}$$

$$R: [-2, \infty) \quad x \leq 1$$

②

$$y = 1 + 1/(x^2)$$

$$D: (-\infty, 0) \cup (0, \infty)$$

$$R: (1, \infty)$$

④

$$y = e^{2x} - 3$$

$$D: (-\infty, \infty)$$

$$R: (-3, \infty)$$

